United States Department of Agriculture
Grain Inspection, Packers and Stockyards Administration
Federal Grain Inspection Service

Program Notice

FGIS-PN-00-2 Date: 2-21-00

ADJUSTMENT FACTOR TABLES FOR HIGH-OLEIC-TYPE SUNFLOWER SEED

1. PURPOSE

This notice announces that the Federal Grain Inspection Service (FGIS) will develop separate custom adjustment factor tables for high-oleic-type sunflower seed for both continuous wave and pulsed Nuclear Magnetic Resonance (NMR) instruments used for official testing purposes. Additionally, this notice is issued to notify official personnel that the custom adjustment factor tables developed for testing the 1998 crop of Mycogen and Pioneer brand high-oleic-type seed on continuous wave NMR instruments will remain unchanged from the previous year.

2. BACKGROUND

The present NMR oil calibration was developed on the basis of linoleic-type sunflower seed. FGIS uses this calibration as a base for measuring oil content for the 3 types (linoleic, mid-oleic, and high-oleic) of sunflower seed. For mid and high-oleic-type samples, official personnel apply an adjustment factor to the NMR instrument result to obtain the true oil value.

FGIS provides a service to custom figure the adjustment factor for proprietary brands of high-oleic-type seed produced in the United States. In the fall of 1998, FGIS prepared custom tables for two specialty seed companies (Mycogen and Pioneer) for their high-oleic-type sunflower seed crop. The tables were developed for use with the FGIS approved Continuous Wave NMR instruments (Oxford 4000, and Oxford Mark III-A models).

FGIS is currently in the process of evaluating a new generation of NMR instruments for official sunflower oil testing. The new generation of instruments uses a different technique (pulsed external radio frequency) for determining the oil content in sunflower seed. Instruments that employ this technology are referred to as Pulsed NMR instruments.

Based on a comparison of results between the continuous wave instruments and pulsed instruments, FGIS has determined that the instruments read differently for high-oleic-type seed. As a result, FGIS will develop separate custom adjustment tables for high-oleic-type seed for each type (continuous wave and pulsed) of NMR instrument.

3. ACTION

Official personnel performing testing of high-oleic-type Pioneer and Mycogen sunflower seed on continuous wave NMR instruments will continue to use the custom adjustment factor tables developed for the 1998 crop. Testing high-oleic-type Pioneer and Mycogen sunflower seed on pulsed NMR instruments will require separate custom adjustment factor tables.

Official personnel must contact FGIS's Technical Services Division to acquire the appropriate adjustment table(s). Citing the proprietary nature of high-oleic-type seed, FGIS releases "custom figured" adjustment tables only to the applicant and official testing location(s) providing NMR testing of the applicant's specialty seed.

4. QUESTIONS

Direct any questions concerning adjustment factors to the Standards and Procedures Branch at (202) 720-0252.

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